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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/580,426

05/24/2006

Hakaru Matsui

035532-0195

1712

22428 7590 03/02/2007

FOLEY AND LARDNER LLP

SUITE 500

3000 K STREET NW

WASHINGTON, DC 20007

EXAMINER

NGUYEN, CHAU N

ART UNIT

PAPER NUMBER

2831

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/02/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/580,426

Applicant(s)

MATSUI ET AL.

Examiner

Chau N. Nguyen

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) *
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08).
Paper No(s)/Mail Date 5/24/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features of the inner conductors using stranded wires as claimed in claim 4, the outer conductor using stranded wires as claimed in claim 6, and a tape wrapping the stranded cores after stranding as claimed in claim 9 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing

sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claim 3 is objected to because of the following informalities: in claim 3, line 4, "the layered core diameter" lacks antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3-7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. (6,495,759) in view of Chevrolet et al. (3,999,003).

Yamamoto et al. (Figures 1-2) discloses a differential signal transmission cable, comprising a plurality of cores (4a,4b), each comprising an inner conductor covered with an insulation, an outer conductor (5) being spirally wrapped around the cores (with a left hand lay direction), and a sheath provided around the outer conductor, wherein the diameter of the cable is 1.0 mm or less.

Yamamoto et al. does not disclose the cores being stranded. Chevrolet et al. (Figure 5) discloses a signal transmission cable comprising a plurality of cores which are stranded together (with a right hand lay direction). It would have been obvious to one skilled in the art to strand the cores of Yamamoto et al. as taught by Chevrolet et al. so that the influence of induction on the transmission

characteristics (i.e. cross-talk) is strongly reduced. Noted that the outer conductor and the stranded cores, in the modified cable of Yamamoto et al., have opposite stranding directions (re claim 1).

The modified cable of Yamamoto et al. also discloses that the stranding pitch of said cores is not more than forty times the layered core diameter (re claim 3), said inner conductors use silver-plated copper alloy stranded wires with a wire diameter of 0.05 mm or less (re claim 4), said insulation uses fluorocarbon resin (re claim 5), said outer conductor uses silver-plated copper alloy stranded wires with a wire diameter of 0.05 mm or less (re claim 6), and said sheath is made of a fluorocarbon resin (re claim 7). Re claim 10, it has been held that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. in view of Chevrolet et al. as applied to claim 1 above, and further in view of Cogelia et al. (3,433,884).

Claim 2 additionally recites the stranded cores comprising four cores.

Cogelia et al. discloses a cable (Figure 5, col. 4, lines 7-8) comprising stranded cores (with a right hand lay direction) which is comprised of four cores. It would have been obvious to one skilled in the art to modify the cable of Yamamoto et al. to have four cores as taught by Cogelia et al. to increase the transmission capacity of the cable.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. in view of Chevrolet et al. applied to claim 1 above, and further in view of Cogelia et al. and Grant et al. (6,169,251).

Claim 8 additionally recites the cores being stranded and polyester filler being located at the center. Cogelia et al. discloses a cable (Figure 5, col. 4, lines 7-8) comprising stranded cores (with a right hand lay direction). It would have been obvious to one skilled in the art to modify the cable of Yamamoto et al. to have stranded cores as taught by Cogelia et al. to increase the transmission capacity of the cable. Grant et al. discloses a cable comprising stranded cores and a filler (7) being located at the center. It would have been obvious to one skilled in the art to dispose the filler as taught by Grant et al. at the center of the modified stranded cores of Yamamoto et al. to resist movement of any one of the cores

radially inward. It would also have been obvious to one skilled in the art to use polyester for the modified filler of Yamamoto et al. since polyester is a known insulating material for being used in signal transmission cables. Moreover, it has been held that within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. in view of Chevrolet et al. as applied to claim 1 above, and further in view of Kobayashi et al. (5,521,333).

Claim 9 in addition to the limitations of claim 1 recites the cores being stranded and a polyester tape wrapping the stranded cores. Kobayashi et al. discloses a cable comprising a polyester tape 3 wrapping stranded cores 2. It would have been obvious to one skilled in the art to wrap a polyester tape around the modified stranded cores of Yamamoto et al. to further protect the cores and to keep the cores in their place.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N. Nguyen whose telephone number is 571-272-1980. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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A handwritten signature in black ink, appearing to read 'Chau N Nguyen', with a long, sweeping horizontal stroke extending to the right.

Chau N Nguyen
Primary Examiner
Art Unit 2831